

SALKIE

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II**

DATE: NOV 23 1987

SUBJECT: Application for Low-Level Radioactive Waste Disposal Site
Use Permit Richland, Washington

FROM: *Paul A. Giardina*
Paul A. Giardina
Regional Radiation Representative

TO: Conrad Simon, Director
Air & Waste Management Division

This regional office will need to obtain a site use permit for the Richland, Washington commercial low-level radioactive waste disposal site so that we may dispose of low-level radioactive waste which will be generated at a CERCLA clean-up at the Arkansas Chemical Company site (previously reported in weekly highlights). A fact sheet describing this site is attached.

The procedure that we have followed in the past was to have the Radiation program file the permit application as well as preparing the required manifests etc., because of our Radiation Safety Officer function and in accordance with our Nuclear Regulatory Commission (NRC) By-Product Materials License. In the past (e.g.: Montclair, Glen Ridge) we have applied for one time use permits because the need for disposal services were usually limited and were specific to one or two sites. In this case, we are applying for a multiple use permit because of the distinct possibility this may be needed and used for the Radium Chemical Company site. Therefore, the additional expense of this permit (\$150 for multiple use vs. \$50 for single use) appears justified. A copy of the permit application is also attached.

Finally, the cost of the permit will be paid by CERCLA and if it is used for other sites, the cost can be prorated for each site. As in the past, the broker, Teledyne Isotopes, actually submits the application on our behalf and bills us for the cost of the permit. That procedure will again be followed in this case.

cc: Richard Salkie ✓
Shawn Googins

433390



ARKANSAS CHEMICAL COMPANY
NEWARK, NEW JERSEY

RADIOLOGICAL FACT SHEET ONLY

RADIOACTIVE MATERIALS ON SITE

During the current chemical removal action radioactive materials in the form of a gas chromatograph foil (like the radioactive detector foils at the Edison, NJ laboratory for which EPA holds a Nuclear Regulatory Commission license) was found at the site. The foil has an activity of approximately 103 to 107 mCi of tritium. In addition, a jar of thorium nitrate has also been identified. The low activity thorium nitrate is routinely used in biomedical and chemical research labs.

RADIOLOGICAL HAZARD

Both materials present a low radiological hazard to personnel and have been isolated and secured at the site in a 55 gallon drum pending disposal. The detector foil contains tritium which has a current allowable intake of approximately 80 mCi. Thus an individual at the site would have to ingest the entire foil to exceed current protective standards. The foil is contained in a small glass vial within a large plastic bottle thus preventing direct handling and potential for contamination. Tritium does not produce radiation which is harmful as long as it remains outside the body. The main hazard from the jar of thorium nitrate would be due to breakage and contamination and ingestion and inhalation. The photons (gamma and x-rays) produced by this material produce a small exposure rate and do not present a hazard to site personnel. The material is safely secured with the foils in the 55 gallon drum

DISPOSAL PLAN

A radioactive waste disposal permit is being obtained for the Richland, Washington site through Teledyne Isotopes as a subcontractor to OH Materials. The permit should be obtained and the material removed from the site by December. (1987)



FOR OFFICE USE ONLY

STATE OF WASHINGTON
APPLICATION FOR SITE USE PERMIT
LOW LEVEL RADIOACTIVE WASTE DISPOSAL SITE
Richland, Washington

Permit # _____
Date Issued _____
Date Expires _____
Date Fee Received _____
\$ _____ Amount Received
Deposited to Account # _____

NAME OF COMPANY U.S. Environmental Protection Agency
ADDRESS 240M-RAD
26 Federal Plaza
CITY NY STATE NY ZIP CODE 10278

NAME OF APPLICANT Paul A. Giardina
(First) (M.I.) (Last)

TITLE Regional Radiation Representative PHONE (212) 264-4416

NRC LICENSE # 31-15050-02 AND/OR AGREEMENT STATE LICENSE # _____

WHAT TYPE OF PERMIT ARE YOU APPLYING FOR?

☒ MULTIPLE USE (RENEWABLE) - \$150.00 FEE REQUIRED PER YEAR

☐ ONE TIME USE ONLY (NON-RENEWABLE) - \$50.00 FEE REQUIRED

IF THIS IS A RENEWAL REQUEST, WHAT IS YOUR SITE USE PERMIT #? _____

DOES YOUR COMPANY ACT AS A BROKER, (AS DEFINED BELOW)? YES _____ NO ☒

"Broker" means a person who performs one or more of the following functions for a low-level radioactive waste generator:

- (a) Arranges for transportation of the low-level radioactive waste;
- (b) Collects and/or consolidates shipments of such low-level radioactive waste;
- (c) Processes such low-level radioactive waste in some manner; provided it shall not mean a carrier whose sole function is to transport such low-level radioactive waste. (Washington Administration Code 173-326)

IF NOT, DO YOU USE A BROKER? ☒ YES ☐ NO IF YES, PLEASE IDENTIFY Telephone Isotopes

PLEASE INDICATE (X) THE GENERAL TYPE OF YOUR FACILITY:

FUEL CYCLE _____ INDUSTRIAL _____
MEDICAL _____ ACADEMIC (non-medical) _____
GOVERNMENT (non-medical) ☒ _____
OTHER (please describe) _____

PLEASE INDICATE (X) THE TYPES OF WASTES THAT YOU WILL BE SHIPPING FOR DISPOSAL:
(This categorization of waste types is adapted from NUREG - 0945, Vol. 1 1982)

LWR Process Wastes

- () PWR Ion Exchange Resins
- () PWR Concentrated Liquids
- () PWR Filter Sludges
- () PWR Filter Cartridges
- () BWR Ion Exchange Resins
- () BWR Concentrated Liquids
- () BWR Filter Sludges

Trash

- () PWR Compactible Trash
- () PWR Noncompactible Trash
- () BWR Compactible Trash
- () BWR Noncompactible Trash
- () Fuel Fabrication Compactible Trash
- () Fuel Fabrication Noncompactible Trash
- (*) Institutional Trash
- () Industrial Source and SNM Trash
- () Low Level Radioactive Trash

Low Specific Activity Wastes

- ☐ Fuel Fabrication Process Wastes
- ☐ UF6 Process Wastes
- ☐ Institutional Liquid Scint. Vial
- ☒ Institutional Liquid Waste
- ☐ Institutional Biowaste
- ☐ Industrial Source and SNM Waste
- ☒ Industrial Low Activity Waste

Special Wastes

- ☐ LWR Nonfuel Reactor Components
- ☐ LWR Decontamination Resins
- ☐ Waste from Isotope Production Facilities
- ☐ Tritium Production Waste
- ☐ Accelerator Targets
- ☒ Sealed Sources
- ☐ Industrial High Activity Waste
- ☐ Mixed Oxide Facility Decontamination Waste

Other

Please describe: _____

PLEASE INDICATE (X) THE TYPES OF RADIONUCLIDES THAT WILL BE CONTAINED IN THE WASTE:

- ☒ H-3
- ☒ C-14
- ☒ Fe-55
- ☒ Co-60
- ☐ Ni-59
- ☐ Ni-63
- ☐ Sr-90
- ☐ Nb-94
- ☐ Tc-99
- ☐ I-129
- ☐ Cs-135
- ☒ Cs-137
- ☐ U-235

- ☒ U-238
- ☒ Ra-226
- ☐ Np-237
- ☐ Pu-238
- ☐ Pu-239
- ☐ Pu-240
- ☐ Pu-241
- ☐ Pu-242
- ☐ Am-241
- ☐ Am-243
- ☐ Cm-243
- ☐ Cm-244

Other - please list Th-232

ESTIMATED VOLUME OF WASTE 2,000 ft³ PER YEAR AND AMOUNT OF ACTIVITY 1-100 Ci PER YEAR.

ESTIMATED NUMBER OF SHIPMENTS PER YEAR 1-5

WILL VOLUME REDUCTION BE APPLIED? ☒ YES ☐ NO

PERCENTAGE OF EACH CLASS OF WASTE (as defined by NRC in Title 10 CFR Part 61) BY VOLUME

Class A (30 %) Class B (25 %) Class C (25 %)

I, the applicant, hereby agree to comply with all applicable state and federal regulations related to the safe management of low-level radioactive waste. I understand that the state of Washington reserves the right to suspend or revoke this permit.

APPLICANT'S SIGNATURE [Signature]

TITLE Regional Radiation Representative

DATE 11/23/87

PLEASE MAIL APPLICATION AND PERMIT FEE TO:
(Make Check Payable to State of Washington)
CASHIER
FISCAL OFFICE - DEPARTMENT OF ECOLOGY
MAIL STOP PV-11
OLYMPIA, WA 98504-8711

IF YOU HAVE QUESTIONS CONCERNING THIS
APPLICATION PLEASE CALL STEPHANIE KO
(206) 459-6862